

Y-STR MPS Panel (KplexSeq-Y24)

5x Primer Mix for Multiplex PCR

Illumina® Nextera® Adapters

NT1 Sequence 5'-TCG TCG GCA GCG TCA GAT GTG TAT AAG AGA CAG

NT2 Sequence 5'-GTC TCG TGG GCT CGG AGA TGT GTA TAA GAG ACA G

Locus		Primer Sequence (5'→3')	Conc. (uM)
DYS19	F	5'-NT1-CCA TCT GGG TTA AGG AGA GTG T	7.00
	R	5'-NT2-TTC ACT ATG ACT ACT GAG TTT CTG TT	7.00
DYS385a/b	F	5'-NT1-GGA AGG AGA AAG AAA GTA AAA AAG AA	10.00
	R	5'-NT2-TTC CAA TTA CAT AGT CCT CCT TTC T	10.00
DYS389 I	F	5'-NT1-CAA CTC TCA TCT GTA TTA TCT ATG TAT C	3.00
DYS389II	F	5'-NT1-CAA CTC TCA TCT GTA TTA TCT ATG TGT G	9.00
	R*	5'-NT2-GAT AGA TTG ATA GAG GGA GGG A	9.00
DYS390	F	5'-NT1-CAA TGT GTA TAC TCA GAA ACA AGG A	1.75
	R	5'-NT2-CTG CAT TTT GGT ACC CCA TA	1.75
DYS391	F	5'-NT1-TTC AAT CAT ACA CCC ATA TCT GTC	1.90
	R	5'-NT2-TGC AAG CAA TTG CCA TAG AG	1.90
DYS392	F	5'-NT1-TAA ACC TAC CAA TCC CAT TCC T	4.00
	R	5'-NT2-TTT GTT ATT TAA AAG CCA AGA AGG	4.00
DYS393	F	5'-NT1-TGT GGT CTT CTA CTT GTG TCA A	1.55
	R	5'-NT2-AAA CTC AAG TCC AAA AAA TGA GG	1.55
DYS437	F	5'-NT1-GAC TAT GGG CGT GAG TGC AT	1.20
	R	5'-NT2-GAT AAG TAG ATA GAC ATC ATT CAC AGA	1.20
DYS438	F	5'-NT1-TGG GGA ATA GTT GAA CGG TAA	2.10
	R	5'-NT2-GCA ACA AGA GTG AAA CTC CAT T	2.10
DYS439	F	5'-NT1-ACA TAG GTG GAG ACA GAT AGA TGA	1.45
	R	5'-NT2-GGC TTG GAA TTC TTT TAC CCA	1.45

*Primer was used to amplify **DYS389 I** and **DYS389II** commonly.

Y-STR MPS Panel (continued)

5x Primer Mix for Multiplex PCR (continued)

Locus		Primer Sequence (5'→3')	Conc. (uM)
DYS448	F	5'-NT1-AGA AAG GGA GAT AGA GAC ATG GA	4.00
	R	5'-NT2-TGG CCG GTC TGG AAA TTT AT	4.00
DYS456	F	5'-NT1-CTG TTG TGG GAC CTT GTG ATA	2.40
	R	5'-NT2-ACT CAG CCC AAA ACT TCT TAA A	2.40
DYS458	F	5'-NT1-GCA ACA GGA ATG AAA CTC CAA	2.10
	R	5'-NT2-CCC AAA GTT CTG GCA TTA CAA	2.10
DYS481	F	5'-NT1-CTC ACC AGA AGG TTG CAA GAC	1.10
	R	5'-NT2-GTC TGC TAA AAG GAA TGT GGC	1.10
DYS533	F	5'-NT1-TCT TCT ACC TAT CAT CTT TCT AGC	2.75
	R	5'-NT2-TCA GTT CTT AAC TCA ACC AAA CAA	2.75
DYS549	F	5'-NT1-GTC CCC TTT TCC ATT TGT GA	3.25
	R	5'-NT2-GCA ATT AGG TAG GTA AAG AGG AAG A	3.25
DYS570	F	5'-NT1-CAA CCT AAG CTG AAA TGC AGA	1.15
	R	5'-NT2-GCT GTG TCC TCC AAG TTC CT	1.15
DYS576	F	5'-NT1-AAT AAG CGT ATT TGT CTT GGC T	1.65
	R	5'-NT2-CAT AGC AAG ACC TCA TCT CTG AA	1.65
DYS635	F	5'-NT1-TGG CTT CTC ACT TTG CAT AGA A	3.00
	R	5'-NT2-GTG GAA CCA GCC CAA ATA TC	3.00
DYS643	F	5'-NT1-TGC CTG GTT AAA CTA CTG TGC	1.95
	R	5'-NT2-TCC CCC CAA AAT TCT ACT GA	1.95
Y-GATA-H4	F	5'-NT1-CTA TTC ATC CAT CTA ATC TAT CCA	9.50
	R	5'-NT2-ATG CTG AGG AGA ATT TCC AA	9.50
Y-M175	F	5'-NT1-TGA TTT AAA CTC TCT GAA TCA GGC	1.35
	R	5'-NT2-TGA TAC CTT TTT TTC TAC TGA TAC CTT T	1.35

Allele and Size Ranges of KplexSeq-Y24 Panel

Locus	Allele Range	Size Range	2800M Genotype
Y-M175	1 - 2	87 - 92	2
DYS389I	9 - 17	85 - 117	14
DYS438	6 - 16	88 - 138	9
DYS643	6 - 17	94 - 149	10
DYS576	11 - 23	95 - 143	18
DYS391	5 - 16	97 - 141	10
DYS392	4 - 20	97 - 145	13
DYS439	6 - 17	100 - 144	12
DYS570	10 - 25	100 - 160	17
DYS393	7 - 18	101 - 145	13
DYS533	7 - 17	102 - 142	12
DYS437	11 - 18	111 - 139	14
DYS549	7 - 17	115 - 155	13
DYS481	17 - 32	119 - 164	22
Y-GATA-H4	8 - 18	121 - 161	11
DYS458	11 - 24	130 - 182	17
DYS456	11 - 23	134 - 182	17
DYS635	15 - 28	136 - 188	21
DYS390	17 - 29	142 - 190	24
DYS19	9 - 19	155 - 195	14
DYS385a/b	7 - 28	169 - 253	13, 16
DYS448	14 - 24	190 - 250	19
DYS389II	24 - 35	197 - 241	31